

STANFORD UNIVERSITY SCHOOL OF MEDICINE

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Dr. Joshua Lederberg
Professor of Medical Genetics
Genetics Building
University of Wisconsin School of Medicine
Madison 6, Wisconsin

Dear Doctor Lederberg:

I cannot tell you how grateful I am to you for your positive and immediate response to my telephone inquiry. I want to repeat again my apology about the telephone call. I thought I had timed it perfectly so that you would already have received Hank Kaplan's letter, and I am sorry that it did not work out that way. I certainly appreciate your taking the time to write to me before you went out of town. Your letter which arrived Friday has been most helpful in providing me with food for thought over the week end. Before I go further into the various considerations which have occurred to me, I think it would be appropriate to give you a little information concerning my background and future interests. I am taking the liberty of enclosing my curriculum vitae and also a copy of the progress report I have just submitted to the U.S. Public Health Service concerning my current investigative program. I hope that both of these may serve to fill in some of the gaps.

When I began to undertake laboratory research five years ago, my approach was almost exclusively physiological, largely because I had no background in biochemistry. For two years I worked at the problem of carbohydrate metabolism in the newborn and premature. I found myself getting more and more interested in the area of intermediary metabolism and more and more frustrated because of my inadequate background. Two years ago, therefore, I took a three months leave of absence from Stanford and spent the summer at Wood's Hole. While there I took the physiology course and also had the opportunity to do some special work with Herman Kalckar. Thanks to my contact with Kalckar and later with Bernie Horecker, whom I visited in Bethesda, I was able to re-orient my research program so that I could use enzyme assays and isotope studies to pursue pathways of intermediary metabolism. It was through Bernie that I got together with Paul Marks, and this association has worked into a most happy and successful collaboration. Paul spent a month in my lab here, and I spent approximately the same amount of time with him in New York. He has taught me most of the techniques which I have been using, and both he and Bernie have been a constant source of help when I have run into trouble. Thanks to all of these circumstances, I feel that in the past two years I have finally managed to get my research off the ground. Most of all I have found out how much satisfaction there is for me in the laboratory. I have a wonderful research associate,

Ruth Hurwitz, who has had years of experience as a research technician, and without whom I could not have made much progress during the past eighteen months when I have also been acting executive of the department. I think we now have a good approach to the problems we are trying to tackle and that we have already unearthed some worthwhile information. I must say, however, that I do not yet feel like an "honest" chemist, and it was for this reason that I had originally planned to spend my sabbatical year learning more biochemistry. I went to the International Congress of Biochemistry in Vienna with the hope of talking the problem over with various people there and finding the place which would provide both the intellectual and cultural opportunities I was seeking. I was indeed able to meet a number of people and to get a great deal of information during that week. To make a long story short, I could not convince myself that there was a really ideal opportunity in Europe for furthering my own research program and at the same time learning more basic biochemistry. This was in a sense fortunate because it forced me to face up more clearly to the question of exactly what I want. I had thought earlier of the possibility of spending a year studying genetics, but at that time I was considering a more specific program, namely, the opportunity of going to Sardinia and working out the mode of inheritance of glucose-6-phosphate dehydrogenase deficiency among the large population of primaquine-sensitive individuals there. I rejected that project as being too circumscribed, but did not look fully into the possibility of taking a broader approach to the field of genetics. This particular block in my thinking persisted to the extent that when I heard that you were definitely coming out to Stanford, I was most interested in pursuing the possibility of getting Barton Childs out here so that we would have someone in our department who could collaborate with you. The more I thought about this, however, the more I became aware of the similar research interests which Barton and I share. The main difference seems to be that my work has been slanted more towards biochemistry and his more towards genetics. Finally, the light dawned, and for the first time I had a really good and clear-cut feeling about how I wanted to spend my sabbatical year, namely, to study biochemistry and genetics. I now feel strongly that, with a year of proper training, I can pursue my own studies with more satisfaction and at the same time learn enough background in genetics so that I can be receptive to all that you and Art Kornberg will have to offer. I would not want to limit my study of genetics to the field of mathematical concepts, but would rather work under someone who has a strong biochemical and microbiological background as well.

With these thoughts in mind I have tried to find out what I could in the library about the people you mentioned in your letter. I was unable to run into anything that Dr. Kemp had recently published. Dr. Lamy, from Paris, has a large number of publications, but all of them seemed to be based on theoretical and mathematical concepts rather than on laboratory investigation. Certainly Dr. Cavalli seems to fit the bill much more closely than either of the former. What's more, I would probably find it very pleasant to live in Milan. It isn't Rome, but it is Italy, and I think it could well be truly delightful. I am sorry

that I was not more specific on the telephone about my reservations about England. The year and one-half which I spent there was in Oxford; therefore, my main reservations about returning apply to Oxford and Cambridge. I have spent six weeks in London and enjoyed it very much. I am not opposed to spending a year there, if that is the very best place I can go. I do not know exactly who is there and would appreciate your advice on this subject. It is my impression, based on very superficial knowledge, that the Penrose Institute is a good place to go for theoretical genetics, but possibly not the best place for the type of study I am looking for. Paul Marks has just returned from a visit to Millhill and he thought there might be some worthwhile opportunities there. I think I can sum it up by saying, I would rather be in Italy at least for the major part of the year, but I am willing to choose London, if you feel strongly that that is the wiser choice. Since I should stay put for at least nine months so that my son can get a full year of schooling, I might perhaps spend a long period of time in one place and briefer periods visiting other centers. I am giving up Rome with a real pang, but I have no desire to waste a valuable year of my life from a professional standpoint.

I feel somewhat apologetic about having unburdened myself at such length; however, I feel that I must rely upon you for advice as to where to go, and it does not seem fair to ask this of you without giving you some of my background. I am writing immediately to Dr. Cavalli and will not make any further inquiries until I receive your suggestions. I shall make several applications for financial support, and I feel that my best chances lie either with Commonwealth or with the U.S.P.H.S. However, for the government fellowships, there is an October 15th deadline which may present a problem. If necessary, I will put in a preliminary request stating how I want to spend my sabbatical and then follow it as soon as possible with the exact details.

I should close by telling you that I have discussed all of this with Bob Alway and he is extremely pleased to know that I am becoming interested in genetics and especially delighted that I have made contact with you. I want to thank you again for all that you have already done, and in advance for your future help without which I would be at a loss to proceed. Best wishes.

Sincerely yours,



Ruth T. Gross, M.D.
Associate Professor in Pediatrics
Acting Executive

RTG:jb